WHAT IS CLAIMED IS:

1. A cover assembly that can be joined to a micro-device package base to form a hermetically sealed micro-device package, the cover assembly including:

a sheet of a transparent material having a window portion defined thereupon; and

a built-up metallic frame adhering to the sheet and circumscribing the window portion, the frame having been deposited onto the sheet by first spraying a first quantity of powdered metal particles onto a prepared frame-attachment area of the sheet using a jet of gas, the gas being at a temperature below the fusing temperature of the metal particles, and the jet of gas having a velocity sufficient to cause the metal particles to merge with one another upon impact with the sheet and with one another so as to form an initial continuous metallic coating adhering to the frame-attachment area of the sheet, and then applying successive quantities of powdered metal particles over the initial continuous metallic coating using the jet of gas so as to form the built-up metallic frame incorporating the initial continuous metallic coating as its base and having an overall thickness that is a predetermined thickness.

2. A cover assembly in accordance with claim 1, wherein the temperature of the jet of gas is below the glass transition temperature (T_G) of the transparent material of the sheet.

3. A cover assembly in accordance with claim 1, wherein the temperature of the jet of gas is below the temperature at which any coatings and finishes previously applied to the sheet are degraded.

4. A cover assembly in accordance with claim 1, wherein the built-up metallic frame includes at least two discrete metallic layers having different compositions.

5. A cover assembly in accordance with claim 4, wherein the majority of the built-up metallic frame is formed of a metallic layer of Kovar alloy.

6. A cover assembly in accordance with claim 1, wherein the built-up metallic frame has a coefficient of thermal expansion (CTE) matching the CTE of the transparent sheet.

7. A cover assembly in accordance with claim 1, wherein the predetermined thickness of the overall thickness of the built-up metal frame above the frame-attachment area is within the range from about 5% to about 100% of the thickness of the transparent material beneath the frame-attachment area.

8. A cover assembly in accordance with claim 1, wherein the predetermined thickness of the built-up metallic frame is within the range from about 130 microns to about 13,081 microns.

9. A cover assembly in accordance with claim 1, wherein the cover assembly is suitable for joining to the package base by welding.

10. A cover assembly in accordance with claim 1, wherein the resulting cover assembly is suitable for joining to the package base by soldering.

11. A micro-device module including:

a package base;

a micro-device supported on the package base; and

a cover assembly joined to the package base so as to encapsulate the micro-device in a hermetically sealed cavity formed between the cover assembly and the package base, the cover assembly including a sheet of a transparent material having a window portion defined thereupon and a built-up metallic frame adhering to the sheet and circumscribing the window portion, the frame having been deposited onto the sheet by first spraying a first quantity of powdered metal particles onto the sheet using a jet of gas, the gas being at a temperature below the fusing temperature of the metal particles, and the jet of gas having a velocity sufficient to cause the metal particles to merge with one another upon impact with the sheet and with one another so as to form an initial continuous metallic coating adhering to the sheet, and then applying successive quantities of powdered metal particles over the initial continuous metallic coating using the jet of gas so as to form the built-up metallic frame incorporating the initial continuous metallic coating as its base.

12. A micro-device module in accordance with claim 11, wherein the temperature of the jet of gas is below the glass transition temperature (T_G) of the transparent material of the sheet.

13. A micro-device module in accordance with claim 11, wherein the temperature of the jet of gas is below the temperature at which any coatings and finishes previously applied to the sheet are harmed.